WHAT IS CLAIMED IS:

1. An anti-cancer vaccine composition comprising an antigen in association with an effective amount of at least one immunomodulator chemotherapeutic adjuvant eliciting an immune response in a patient and a pharmaceutically acceptable carrier.

2. The anti-cancer vaccine of claim 1, wherein said vaccine is selected from the group consisting of whole-cell vaccine, DNA vaccine, protein-based vaccine, peptide-based vaccine and attenuated organism vaccine.

3. The anti-cancer vaccine of claim 1, wherein said antigen is inactivated tumor cells.

4. The anti-cancer vaccine of claim 1, wherein said antigen is tumor cells inactivated by said chemotherapeutic agent.

5. The anti-cancer vaccine of claim 3, wherein said tumor cells are inactivated by radiotherapy and/or chemotherapy.

6. The anti-cancer vaccine of claim 3, wherein said tumor cells are inactivated by radiotherapy.

7. The anti-cancer vaccine of any one of claims 1-6, wherein said vaccine is eliciting an immunoprotective response against a cancer selected from the group consisting of basal cell carcinoma, bladder cancer, bone cancer, brain cancer, CNS cancer, breast cancer, cervical cancer, colon cancer, rectum cancer, connective tissue cancer, esophageal cancer, eye cancer, kidney cancer, larynx cancer, liver cancer, lung cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, melanoma, myeloma, leukemia, oral cavity cancer, ovarian cancer, pancreatic cancer, prostate cancer, rhabdomyosarcoma, skin cancer, stomach cancer, testicular cancer, neoplasia and uterine cancer.

8. The anti-cancer vaccine of any one of claims 1-6, wherein said vaccine is eliciting an immune response against a cancer selected from the group consisting of bladder cancer, prostate cancer, melanoma, breast

cancer, colon cancer, lung cancer, liver cancer, lymphoma, myelona, leukemia and ovarian cancer.

9. The anti-cancer vaccine of claim 1, wherein said chemotherapeutic adjuvant is a taxane.

10. The anti-cancer vaccine of claim 1, wherein said chemotherapeutic adjuvant is selected from the group consisting of Cyclophosphamide, Doxorubicin, Cisplatin, Paclitaxel and 5-fluorouracil.

11. The anti-cancer vaccine of any one of claim 1-10, further comprising a therapeutically effective amount of a therapeutic agent.

12. The anti-cancer vaccine of claim 11, wherein said therapeutic agent is selected from the group consisting of cytokine, antibody, systemic chemotherapeutic agent, biological response modifier and hormones.

13. The anti-cancer vaccine of claim 12, wherein said antibody is a monoclonal antibody.

14. The anti-cancer vaccine of claim 12, wherein said biological response modifier is selected from the group consisting of interferon and lymphokine.

15. The anti-cancer vaccine of claim 14, wherein said lymphokine is IL-2.

16. The anti-cancer vaccine of any one of claims 1-15, further comprising a non-chemotherapeutic adjuvant selected from the group consisting of polysaccharides, CpG nucleic acids, MF59, SAF, MPL and QS21.

17. The anti-cancer vaccine of any one of claims 1-16, further comprising a non-chemotherapeutic adjuvant selected from the group consisting of adjuvants that create a local reservoir of drug, adjuvants that stimulate the immune system, mucosal adjuvants, phosphazene and *Leishmania* elongation factor.

18. A method for eliciting an immune response against cancer in a patient, said method comprising administering a therapeutically effective quantity of the anti-cancer vaccine of any one of claims 1 to 17 to said patient.

19. The method of claim 18, wherein said vaccine is administered by a route selected from the group consisting of locally, parenterally, peritoneally, mucosaly, dermaly, epidermaly, subcutaneously, transdermally, intramuscularly, nasaly, orally, topically, vaginally, rectally, intra-ocularly, intravenously, intra-arterially and by inhalation.

20. The method of claim 18, wherein said vaccine is administered intramuscularly or subcutaneously.

21. A method for reducing tumor growth in a patient comprising administering a therapeutically effective quantity of the anti-cancer vaccine of any one of claims 1 to 17 to said patient to elicit an immune response in said patient, thereby reducing tumor growth.

22. The method of claim 21, wherein said vaccine is administered by a route selected from the group consisting of locally, parenterally, peritoneally, mucosaly, dermaly, epidermaly, subcutaneously, transdermally, intramuscularly, nasaly, orally, topically, vaginally, rectally, intra-ocularly, intravenously, intra-arterially and by inhalation.

23. The method of claim 21, wherein said vaccine is administered intramuscularly or subcutaneously.

24. The method of claim 21, further comprising administering at least one of radiotherapy, surgery and chemotherapy to said patient prior to vaccination.

25. The method of claim 21, further comprising administering at least one of radiotherapy, surgery and chemotherapy to said patient after vaccination.

26. The method of claim 21, further comprising administering a further adjuvant prior to vaccination.

27. The method of claim 21, further comprising administering a further adjuvant after vaccination.

28. The method of any one of claim 26 and 27, wherein said further adjuvant is selected from the group consisting of CpG, nucleic acids, MF59, SAF, MPL and QS21.

29. The method of any one of claim 26 and 27, wherein said further adjuvant is selected from the group consisting of adjuvants that create a depot effect, adjuvants that stimulate the immune system, mucosal adjuvants, phosphazene and *Leishmania* elongation factor.

30. A method for preventing tumor growth in a patient, comprising administering a prophylactic effective amount of the anti-cancer vaccine of any one of claims 1 to 17 to said patient to elicit an immune response in said patient, thereby preventing tumor growth.

31. The method of claim 30, wherein said vaccine is administered by a route selected from the group consisting of locally, parenterally, peritoneally, mucosaly, dermaly, epidermaly, subcutaneously, transdermally, intramuscularly, nasaly, orally, topically, vaginally, rectally, intra-ocularly, intravenously, intra-arterially and by inhalation.

32. The method of claim 30, wherein said vaccine is administered intramuscularly or subcutaneously.

33. The method of claim 30, further comprising administering at least one of radiotherapy, surgery and chemotherapy to said patient prior to vaccination.

34. The method of claim 30, further comprising administering at least one of radiotherapy, surgery and chemotherapy to said patient after vaccination.

35. The method of claim 30, further comprising administering a further adjuvant prior to vaccination.

36. The method of claim 30, further comprising administering a further adjuvant after vaccination.

37. The method of any one of claim 35 and 36, wherein said further adjuvant is selected from the group consisting of CpG, nucleic acids, MF59, SAF, MPL and QS21.

38. The method of any one of claim 35 and 36, wherein said further adjuvant is selected from the group consisting of adjuvants that create a depot effect, adjuvants that stimulate the immune system, mucosal adjuvants, phosphazene and *Leishmania* elongation factor.